Water Quality Report

2011

Real East Texas

CITY OF LONGVIEW

What has been said about water?

★ "If there is magic on this planet, it is contained in water." Loran Eisely, *The Immense Journey*, 1957

★ "The noblest of the elements is water." Pindar, *Olympian Odes*

★ "Water, taken in moderation, cannot hurt anybody." Mark Twain

★ "When the well is dry, we know the worth of water." Benjamin Franklin, (1706-1790), *Poor Richard's Almanac*, 1746

★ "Human nature is like water. It takes the shape of its container." Wallace Stevens

★ "Water is the only drink for a wise man." Henry David Thoreau (American essayist, poet and philosopher, 1817-1862)

★ "Nothing in the world is more flexible and yielding than water. Yet when it attacks the firm and the strong, none can withstand it, because they have no way to change it. So the flexible overcome the adamant, the yielding overcome the forceful. Everyone knows this, but no one can do it." Lao Tzu (Chinese Taoist philosopher, founder of Taoism, 600 BC-531 BC)

★ "Water is life's mater and matrix, mother and medium. There is no life without water." Albert Szent-Gyorgyi (Hungarian biochemist, 1937 Nobel Prize for medicine, 1893-1986)

★ "Water does not resist. Water flows. When you plunge your hand into it, all you feel is a caress. Water is not a solid wall, it will not stop you. But water always goes where it wants to go, and nothing in the end can stand against it. Water is patient. Dripping water wears away a stone. Remember that, my child. Remember you are half water. If you can't go through an obstacle, go around it. Water does." Margaret Atwood, *The Penelopiad*

★ "Water is the driving force in nature." Leonardo da Vinci

★ "Water has no taste, no color, no odor; it cannot be defined, art relished while ever mysterious. Not necessary to life, but rather life itself. It fills us with a gratification that exceeds the delight of the senses." Antoine de Saint-Exupery (1900-1944), *Wind, Sand, and Stars*, 1939

★ "Land and water are not really separate things, but they are separate words, and we perceive through words." David Rains Wallace, *The Untamed Garden and Other Personal Essays*

★ "Water is the one substance from which the earth can conceal nothing; it sucks out its innermost secrets and brings them to our very lips." Jean Giraudoux (1882-1944), *The Madwomen of Chaillot*, 1946

★ "In one drop of water are found all the secrets of all the oceans; in one aspect of You are found all the aspects of existence." Khalil Gibran

★ "And it is an interesting biological fact that all of us have, in our veins the exact same percentage of salt in our blood that exists in the ocean, and, therefore, we have salt in our blood, in our sweat, in our tears. We are tied to the ocean. And when we go back to the sea, whether it is to sail or to watch it, we are going back from whence we came." John F. Kennedy

★ "If you gave me several million years, there would be nothing that did not grow in beauty if it were surrounded by water." Jan Erik Vold, *What All the World Knows*, 1970

★ ".... beautiful, pure, blessed, and glorious, forever the same, sparking, pure water!" John B. Gough, *Toast to Water*

★ "It is difficult to find anything more healthy to drink than good cold water, such as flows down to us from springs and snows of our mountains. This is the beverage we should drink. It should be our drink at all times." Brigham Young, *Journal of Discourses by Brigham Young V12, His Two Counselors, the Twelve Apostles, and Others*

Water Quality Report **2011**

CITY OF LONGVIEW
Real East Texas

P.O. BOX 1952
LONGVIEW, TEXAS 75606-1952
(903) 237-2780

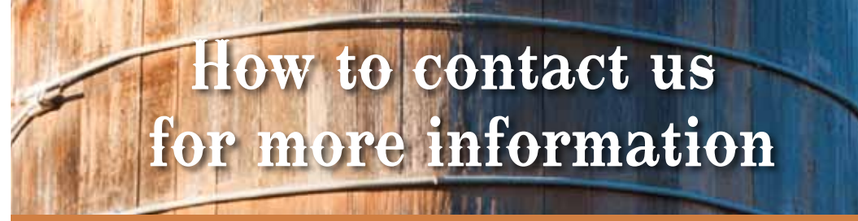
PRSRT STD
U.S. POSTAGE
PAID
LONGVIEW, TX
PERMIT NO. 9

What does your City Manager, David Willard, have to say?

Growing up in the west Texas town of Borger, I have a true appreciation for the water we are blessed to have in Longview. In Borger, the average annual rainfall is only about 22 inches. In Longview, we average more than 49 inches of rainfall each year. That rainfall makes a world of difference for our community. It nourishes our landscape, fills local lakes, attracts businesses, provides high quality drinking water, and so much more. As we all know from the drought this past year, adequate water supply is vitally important. In 2010 and 2011, we had several months of dry weather that slowly parched the ground, lowered lake levels, and brought significant wildfires. Thankfully, the rainfall returned during the early months of 2012, and our lakes and land have been replenished. As we continue to look forward, it's our goal at the City of Longview to use our precious water resources wisely, while providing the best possible drinking water to the community. We can all be thankful for the water we have, and we can be hopeful that the days of drought are behind us for now. Longview is a great place to live, and water is one of our greatest resources.

David Willard

ACCOUNTABILITY · TEAMWORK · INTEGRITY · PROFESSIONALISM
CITY OF LONGVIEW, TX



How to contact us for more information

Billing Questions: 903-237-1030
Questions About the Quality of Your Drinking Water: 903-237-2780
Water & Sewer Emergency, Service Interruptions: 903-236-3030
Water Conservation or to Request a Speaker: 903-237-1034
Source Water Assessment Questions: 903-291-5234
Storm Water Runoff & Pollution Management: 903-237-1286
To Report Water Pollution: 903-291-5234

You can also find us on the internet at www.LongviewTexas.gov

The City Council meets every 2nd and 4th Thursday of each month.
Call 903-237-1080 or check our website for more information.

The Longview City Hall is located at 300 West Cotton Street.
Offices are open from 8 a.m. to 5 p.m.

Este reporte incluye informacion importante sobre el agua para tomar. Para asistancia en espanol, favor de llamar al telefono 903-237-1060, 903-237-1236, 903-232-0063, or 903-237-1199.

Special Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the safe Drinking Water Hotline at (800) 426-4791.

Substances Expected in drinking water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

★ MICROBIAL CONTAMINANTS: such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

★ INORGANIC CONTAMINANTS: such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial, or domestic wastewater discharges, oil and gas production, mining or farming.

★ PESTICIDES AND HERBICIDES: which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

★ ORGANIC CHEMICAL CONTAMINANTS: including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

★ RADIOACTIVE CONTAMINANTS: which can be naturally-occurring or be the result of oil and gas production and mining.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

If you have any health concerns related to the information in this report, we encourage you to contact your health care provider. For more information about this report, or for any questions relating to your drinking water, please call the Water Purification Division at 903-237-2780.

Real East Texas
CITY OF LONGVIEW

Designed and printed by **HUDSON PRINTING & GRAPHIC DESIGN**
Texas Water Star cover image provided by Carollo Engineers.

Longview Continues
to improve your water quality & service

Drinking water standards continue to tighten, and our challenge is to meet these stricter regulations. This means we must continue to update the treatment technology used at our water plants. As the City of Longview continues to grow and look toward the future, we continue to improve ourselves and the quality of the water that is sent to you and how it travels to your home or business. The City of Longview's Public Water system is widely recognized as a leader in the municipal utility industry and has made a measurable improvement to customer service.

The Environmental Protection Agency (EPA) is always evaluating new processes and implementing new rules to address more stringent treatment of your drinking water. The most recent rules regarding surface water treatment are the Stage 1 and Stage 2 Disinfectants & Disinfection By-products (Stage 2 DBP) Rule, the Long Term 2 Enhanced Surface Water Treatment (LT2) Rule, and Phases 1, 2, and 3 of the Unregulated Contaminant Monitoring Rule (UCMR).

The Stage 2 DBP Rule builds upon earlier rules that addressed disinfection by-products to improve your drinking water quality and provide additional public health protection from disinfection by-products. It is intended to reduce potential cancer and reproductive and developmental health risks from disinfection by-products in drinking water, which form when disinfectants are used to control microbial pathogens. The City of Longview has evaluated their distribution system and will begin sampling for the Stage 2 DBP Rule in October 2012. Currently, the licensed professionals of the City of Longview have been very successful in lowering disinfection by-products well below the maximum contaminant level. They have and continue to research new treatment processes to ensure DBPs remain low.

The information from all of these new rules will be compiled by the EPA and used to provide additional modifications or improvements in the treatment techniques used by the City of Longview and used in future regulatory decision making by the EPA. For more information on these and other rules and regulations, visit: www.epa.gov/safewater.

In the upcoming year, switchgears at Cherokee Raw Water Pump Station and Sabine River Water Treatment Plant will be replaced due to loss of manufacturer support. These projects will include an emergency generator modification at the Sabine River Water Treatment Plant.

Two water lines will be laid during the next year also. A 12-inch water line will be laid from the Lake Cherokee Water Treatment Plant to the East Texas Regional Airport. An 18-inch water line will be laid on George Richey Road, from Gilmer Road (Highway 300) to Pine Tree Road (FM 1845). Both water lines will enable the City to better serve customers in their respective areas.

"Water seeks its own level. Look at them. The Tigris, the Euphrates, the Mississippi, the Amazon, the Yangtze. The world's great rivers. And every one of them finds its way to the ocean." Ð Alison McGhee, *All Rivers Flow to the Sea*

Longview's Drinking Water
from the source to your tap

Longview uses surface water from three sources: Lake Cherokee, Sabine River, and Lake O' the Pines. A source water assessment has been completed by the Texas Commission on Environmental Quality (TCEQ) for all three water sources and the report is available to review by calling us at 903-291-5234 or 903-237-2780. It allows us to focus on our source water protection activities. The results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detection of these contaminants will be found in this report. For more information on source water assessments and protection efforts at our system contact us at 903-291-5234. To monitor water quality in local rivers, streams, and reservoirs, the City of Longview has a Watershed Management Program. We work closely with the Sabine River Authority, Cherokee Water Company, Northeast Texas Municipal Water District, Texas Railroad Commission, Texas Commission on Environmental Quality (TCEQ), Texas Parks and Wildlife Commission, American Water Works Association, Texas Water Utilities Association and local industries to monitor and maintain a high level of water quality.

Under normal operating conditions, the Cherokee, Sabine River, and Lake O' the Pines Water Treatment Plants treat and distribute water to elevated and ground storage tanks with the capacity of approximately 6 million gallons of water throughout the city in over 600 miles of pipeline. The east and southeast regions of Longview typically receive water from the Cherokee Water Treatment Plant. The west and southwest regions of Longview receives water from the Sabine River Water Treatment Plant. The north region receives water from the Lake O' the Pines Water Treatment Plant. Due to changes in demand and normal or emergency maintenance requirements, the typical distribution of water may change and residents may receive water from any of the water treatment plants.

As you are most likely aware, 2011 was the worst drought in Texas History. Fortunately, due to the expert planning abilities of our City's past and present managers and directors and the present hardworking individuals, the City of Longview did not experience any water shortages or implement any conservation plans during 2011. During this terrible drought and wildfires, each individual employee worked extremely hard to maintain the supply and quality of your drinking water.

Storm Water
pollution prevention program

Watersheds may be susceptible to contamination resulting from flood, erosion, and pollution, also referred to as storm water runoff. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment or other pollutants that could adversely affect water quality if the runoff is discharged untreated. The primary method to control storm water discharges is the use of best management practices (BMPs).

The following are some common BMPs that may help prevent storm water pollution:

- ★ Use fertilizers sparingly; dispose of unused yard chemicals appropriately.
- ★ Sweep up driveways, sidewalks, and gutters.
- ★ Never dump, blow, sweep, or wash anything down storm drains.
- ★ Don't leave bare spots in your yard.
- ★ Compost wastes.
- ★ Use less toxic pesticides, follow labels, and learn how to prevent pest problems.
- ★ Direct downspouts away from paved surfaces; consider a rain garden to capture runoff.
- ★ Take your car to the car wash instead of washing it in the driveway.
- ★ Check your car for leaks and recycle your motor oil. If you cannot get to a leak immediately, use cardboard under your car when parked.
- ★ Pick up after your pet.
- ★ Remember that storm drains discharge into the local water bodies and you need to protect these water bodies.

The City of Longview has incorporated a program to help manage storm water pollution. Storm water pollution is being reduced from the monitoring and modification of the City's operations through good municipal housekeeping and best management practices. Our program also works to control construction runoff resulting in less sediment, the number one pollutant in our watersheds, through the use of silt fencing or hay bales. Finally, one of the most important parts of this program is the education and involvement of the public and citizens of Longview regarding watersheds and storm water pollution. You can make a difference!

For more information or to report an incident regarding discharges into the storm water drains or into the watershed, please feel free to contact the Streets and Drainage Division of the City of Longview's Public Works Department at 903-237-1286.

Frequently Asked
questions about your water

★ If my water tastes or smells different, is it still safe to drink?
All water has its own unique taste and odor characteristics. Contaminants may be found in drinking water that can cause taste, color or odor problems. These types of problems are not necessarily causes for health concerns. The City of Longview, like many other water suppliers, occasionally experiences changes in taste and odor. Algae and bacteria naturally found in surface waters can produce different types of tastes and odors. Geosmin and 2-Methylisoborneol (MIB) have been identified as odor-causing compounds and are detectable at levels as low as five parts per trillion (ppt or nanograms per liter). When conditions are favorable (changes in temperature, excessive rainfall, flooding, drought, or dry weather conditions), the bacteria and certain blue-green algae produce a musty or earthy taste and odor. Although these contaminants impart an unpleasant taste and odor, they do not have an established Maximum Contaminant Level (MCL) nor pose any known health risks. Water that has been stored in a pipe for a long time, especially during warm weather, also may develop an odor. That explains why you may notice a change in your water after returning from vacation.

★ What is the hardness of the water?
Water supplied to you is considered soft to moderately hard in the Lake O' the Pines service area and moderately hard in the Lake Cherokee and Sabine River service areas. What makes water hard is a combination of minerals that are present in nearly all natural waters. The average hardness for water in 2011 from Lake Cherokee is 82 mg/L (4.8 grains/gallon), Lake O' the Pines is 68 mg/L (4.0 grains/gallon), and Sabine is 86 mg/L (5.0 grains/gallon)

★ Why does my water appear cloudy or milky at times?
Cloudy water is often caused by dissolved oxygen being released form the water. Cold water can hold more oxygen than warm water. Water saturated with oxygen will release oxygen as it warms or as the pressure is released. This release makes the water appear milky or cloudy, but it does not affect the safety of the water. The cloudiness usually will disappear in about 30 seconds.

★ Why does my water sometimes look brown or red?
Often your water is discolored because of pipeline breaks and repairs. The color comes from iron or mineral deposits inside the pipe that become dislodged during the repairs. If the color is due to line breaks, run the faucet until the water is clear. If the water does not clear within several minutes, call the water and sewer emergency line at 903-236-3030 for assistance.

★ What is the white build-up on my faucet strainers?
The white build-up is calcium carbonate. Lime is added to the water to adjust the pH to provide a stable water to prevent premature corrosion of the distribution system. This calcium carbonate product places a protective film that coats the inside of the water pipes much like the paint on your car or house protects the metal or wood. When there is a change in flow or the water usage increases in the pipeline, calcium carbonate build-up may break off and enter the water stream. Calcium carbonate may accumulate in the water heater or sink faucet strainers. To alleviate this problem, you can flush the lower drain system on your water heater or rinse off the deposits on the sink faucet strainer.

What's in the water ?

We are pleased to report that during the past year, the water delivered to your home or business met or surpassed all state and federal drinking water requirements. We analyze water samples for numerous regulated and non-regulated substances for your safety and satisfaction. For your information, in the following tables, we have listed the substances that were detected in our drinking water during the year. Although all of the substances listed are under the Maximum Contaminant Level (MCL) set by U.S. EPA, we believe it is important that you know exactly what was detected and how much of the substance was present in the water.

Water Security:
The water you save may be your own!

Water security is a shared responsibility involving water suppliers, wastewater utilities, government, law enforcement and citizens, such as you. We can all be involved in homeland security by playing an important role in protecting our critical water resources. Local drinking water and wastewater systems may be targets for terrorist and other possible criminals wishing to disrupt and cause harm to your community. Water utilities are often located in isolated areas. Drinking water sources and wastewater collection systems may cover large areas that are difficult to secure and patrol without your help.

Residents can be informed on how to observe and notice, what to report and who to report to, with regard to any suspicious activity in and around local water utilities. Interested and dedicated citizens are essential to increase the security eyes and ears in your community.

What you observe is important:

If you see a non-City vehicle at any of the water towers, raw water pump stations, or water treatment plants at odd hours, please be sure to contact us. When you contact us, be sure to do the following:

- ★ Observe and state the nature of the incident.
- ★ Identify yourself and your location.
- ★ Identify location of activity.
- ★ Describe any vehicle involved (color, make, model, license plate #).
- ★ Describe the participants (how many, sex, race, color of hair, height, weight, clothing).
- ★ What kind of activity was the participant(s) involved in? Were they taking pictures? Were they sitting in their car or walking around the parameter?
- ★ Remember that the more information you provide the better.

Form and operate a citizen's watch network within your community to communicate regularly with law enforcement, your public water supplier and wastewater operator. Communication is the key to a safer community! Be alert! Become aware of your surroundings.

For more information on water security visit: www.epa.gov/safewater/security

Table Definitions

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MAXIMUM CONTAMINANT LEVEL (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL) – The highest level of a disinfectant allowed in drinking water. This is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

TREATMENT TECHNIQUE (TT) – A required process intended to reduce the level of a contaminant in drinking water.

ACTION LEVEL (AL) – The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

mrem/YEAR – Millirems per year (a measure of radiation absorbed by the body)

pCi/L – Picocuries per liter (a measure of radioactivity)

NTU – Nephelometric turbidity units (a measure of turbidity)

ppm – Parts per million / milligrams per liter (mg/l)

ppb – Parts per billion / micrograms per liter (ug/l)

NA – Not applicable

ND – Not detectable at testing limits

Regulated Substances
AT THE TREATMENT PLANT

YEAR	CONSTITUENT	AVERAGE	DETECTED RANGE	MCL	MCLG
2011	Chloramines (ppm)	1.55	1.24 - 1.71	4	4
	Disinfectant used to control microbes				
2011	Chlorite (ppm)	0.328	0.08 - 0.61	1	0.8
	By-product of drinking water disinfection				
2011	Barium (ppm)	0.509	0.039 - 0.063	2	2
	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits				
2011	Fluoride (ppm)	0.68	0.63 - 0.75	4	4
	Erosion of natural deposits; water additive which promotes strong teeth				
2011	Nitrate (ppm)	0.14	0.08 - 0.20	10	10
	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion from natural deposits				
2011	Chromium (ppm)	0.001	0.004 - 0.002	0.01	0.01
	Discharge from steel and pulp mills; erosion of natural deposits				
2011	Selenium (ppm)	0.003	0.002 - 0.003	0.05	0.05
	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines				
2011	Gross Beta particles & Photon emitters (pCi/L)	1.367	ND - 4.1	50	NA
	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation				
2011	Total Organic Carbon (ppm) - Source Water	5.55	4.36 - 7.36	NA	NA
	Naturally present in the environment				
2011	Total Organic Carbon (ppm) - Drinking Water	3.22	2.33 - 4.35	NA	NA
	Naturally present in the environment				
2011	Total Organic Carbon % Removal	41.12	22.94 - 57.07	NA	NA
	The TOC removal ratio is the percent of TOC removed through the treatment process divided by the percent of TOC required by the TCEQ to be removed. The City of Longview water system provides the alternative compliance criteria removal ratio required.				

Total Organic Carbon (TOC) has no adverse health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Total organic carbon provides a medium for the formation of disinfection by-products when water is disinfected. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

YEAR	CONSTITUENT	HIGHEST SINGLE MEASUREMENT	LOWEST MONTHLY % OF SAMPLES MEETING LIMITS	TURBIDITY LEVEL
2011	Turbidity (NTU)	0.34	100	0.3
	Soil runoff			

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity is measured in Nephelometric Turbidity Units (NTU) and is a measurement of water clarity. It is a good indicator of water quality. This water quality parameter is monitored as a treatment technique (TT).

Regulated Substances
AT THE CUSTOMER'S TAP

YEAR	CONSTITUENT	THE 90th PERCENTILE	# OF SITES EXCEEDING ACTION LEVEL	ACTION LEVEL
2009	Lead (ppb)	0.0013	0	15
	Corrosion of household plumbing systems; erosion of natural deposits			
2009	Copper (ppm)	0.0291	0	1.3
	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives			

The City of Longview is on a reduced sampling schedule for lead and copper, due to an excellent compliance history. The results listed above are distribution samples taken from the customers' tap. Lead and copper have not been detected in water leaving the water treatment facilities. The source of lead and copper is corrosion of household plumbing systems.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Longview analyzes over 984 samples each year. All samples taken were negative and did not indicate the presence of coliform bacteria.

Regulated Substances
IN THE DISTRIBUTION SYSTEM

YEAR	CONSTITUENT	AVERAGE	RANGE	MCL	MCLG
2011	Total Trihalomethanes (ppb)	35.5	16.4 - 57.1	80	NA
	Byproduct of drinking water chlorination				
	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.				
2011	Total Haloacetic Acids (ppb)	13.6	5.5 - 23.8	60	NA
	Byproduct of drinking water chlorination				
	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.				

Unregulated Substances
AT THE TREATMENT PLANT

YEAR	CONSTITUENT	AVERAGE	RANGE
2011	Chloroform (ppb)	30.11	28.53 - 32.13
	By-product of drinking water chlorination		
2011	Dichlorobromomethane (ppb)	17.22	10.80 - 24.20
	By-product of drinking water chlorination		
2011	Dibromochloromethane (ppb)	10.96	5.29 - 17.13
	By-product of drinking water chlorination		
2011	Bromoform (ppb)	2.61	ND - 3.43
	By-product of drinking water chlorination		

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Additional Parameters

This chart lists other items for which the water is tested. These items do not relate to public health but rather to the aesthetic quality. These parameters are often important to industrial water users or customers with special needs.

CONSTITUENT	UNITS OF MEASURE	LONGVIEW WATER
Aluminum	ppm	0.17 - 0.54
Manganese	ppm	0.0009 - 0.0019
Nickel	ppm	0.0013 - 0.0014
Zinc	ppm	0.0052 - 0.0092
Chloride	ppm	13.5 - 41.6
Copper	ppm	0.0005 - 0.003
Sulfate	ppm	39.4 - 67.6
pH	pH units	8.7 - 9.4
Conductivity	µmhos/cm	225 - 306
Total Alkalinity as $CaCO_3$	ppm	21 - 32
Bicarbonate	ppm	20 - 32
Dissolved Solids	ppm	129 - 186
Calcium	ppm	18.3 - 24.9
Magnesium	ppm	3.33 - 4.96
Sodium	ppm	11.3 - 26.6
Iron	ppm	0.015 - 0.053
Total Hardness as $CaCO_3$	ppm	69.2 - 82.6
Total Hardness in Grains	Grains/Gallon	4.04 - 4.82